

ABSTRACT

A novel vertical alignment liquid crystal display with a structure having a flower-shaped vertical alignment (FVA) has the properties of fast response, high contrast ratio and a wide view angle. The method for making the device and structure of the FVA comprises the arrangement of: a first substrate with a protrusion shaped electrode as the pixel electrode; a second substrate as the common electrode; aligning layers formed on said first and second substrates providing liquid crystal vertical alignment; liquid crystal materials filling a space between said first and second substrates as a liquid crystal cell; a linear polarizer and wide band quarter-wave film forming a circular polarizer; and, said circular polarizer disposed on exterior surfaces of said liquid crystal cell. When voltage is applied to the device, the liquid crystal (LC) director distribution looks like a flower blossom.